

Saufley Field UST-001 Off-Base Plume

Presented By
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Naval Facilities Engineering Command (NAVFAC)
South East

Objective



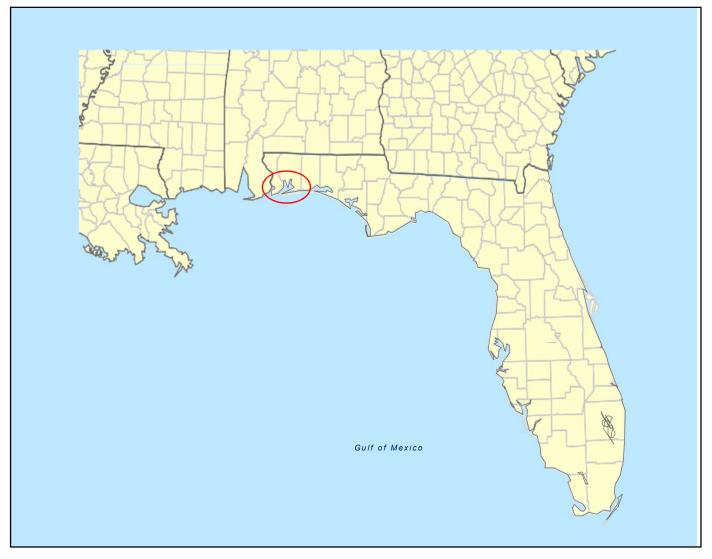
Objective:

Present Overview of Saufley Field Off-Base Plume

- Describe series of events leading from initial indications of no off-base migration to a finding of off-base migration.
- Show "It ain't over till it's over" applies to Groundwater Investigations
- Describe action to mitigate the off-base migration
- Present general plans for long term treatment

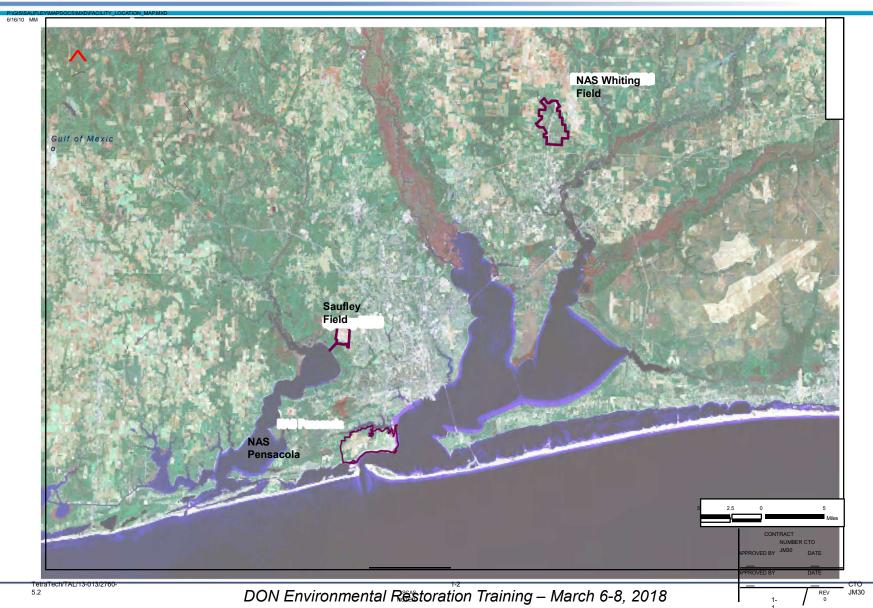
Location: NAS Pensacola





Pensacola & Out Lying Fields





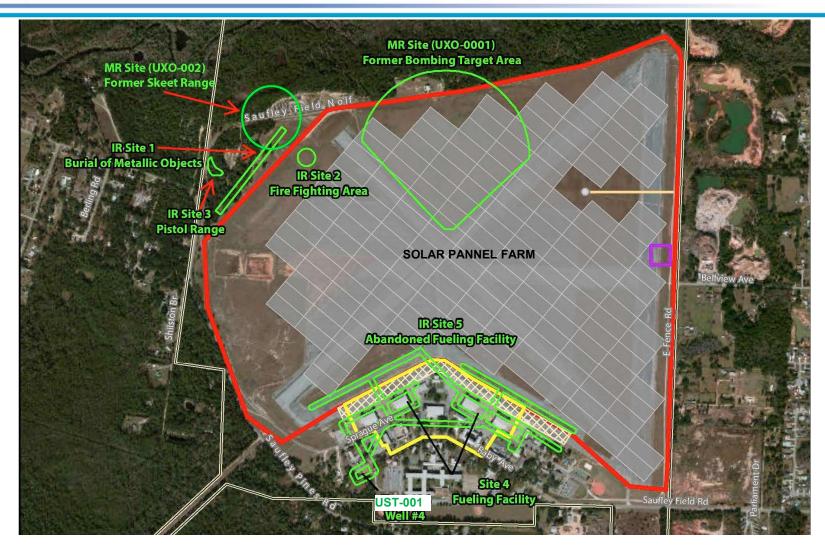
History- Saufley Field



- Saufley Field opened in 1940s and became a Naval Air Station
- In 1976 decommissioned and 1979, reactivated as a Naval Training Center and host to 10 DOD tenets
- Today leased to Federal Bureau of Prisons and air field recently leased to Gulf Power for a Solar Farm

NATEAC

Saufley Field Today



Saufley Field today with IR sites & Solar Panel Farm

Saufley Field 1958

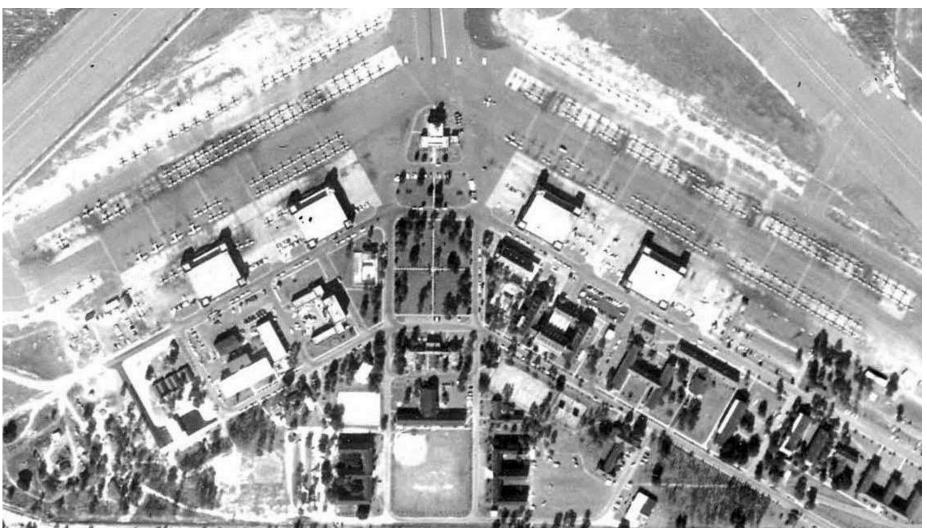




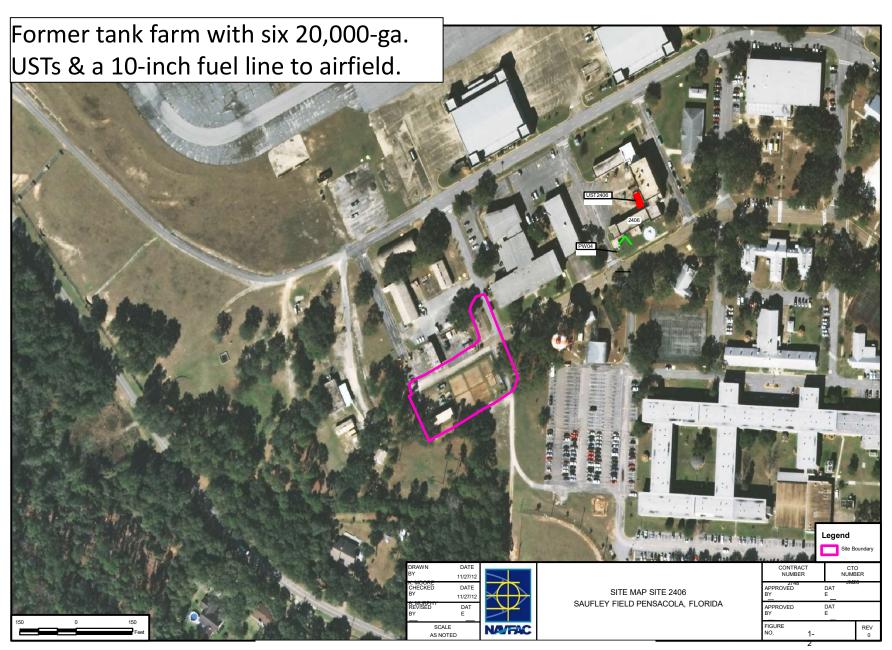
Photo shows a very active Saufley Field in 1958



Saufley Field 1958



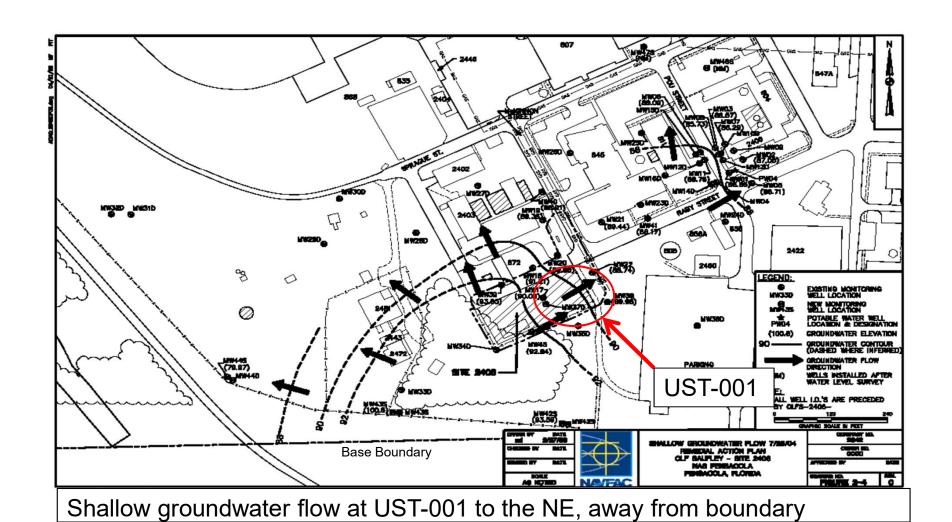
Active Hanger Area with Multiple Rows of Parked Planes



UST-001 Location

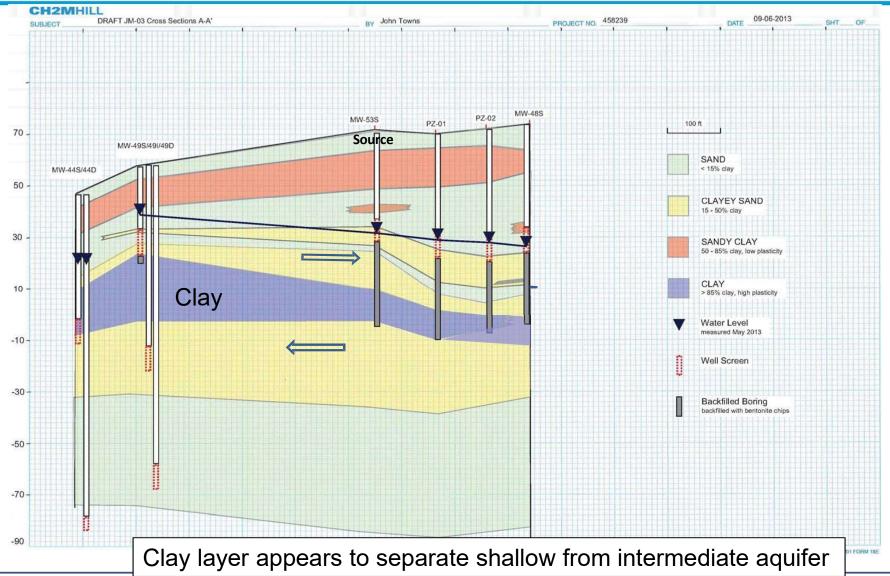
Shallow Groundwater Flow





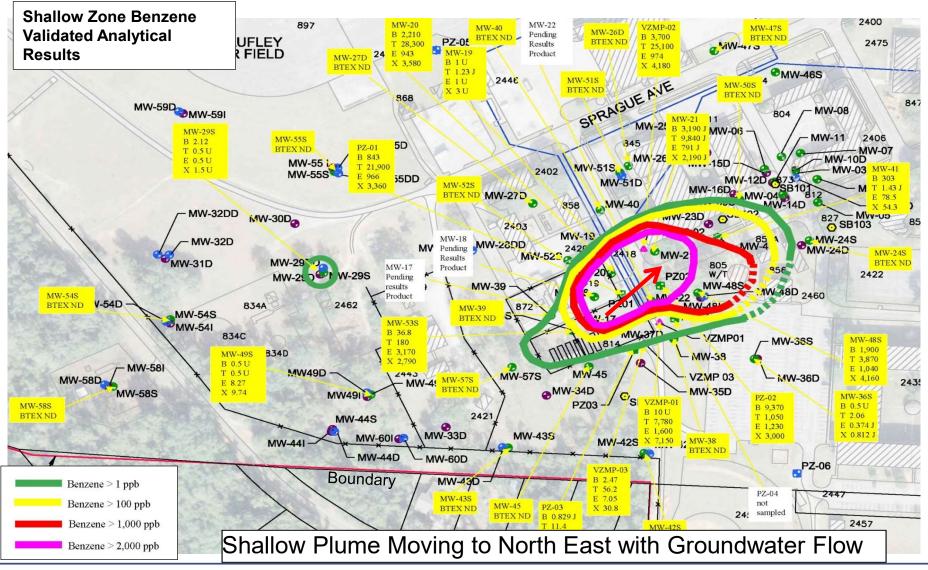
Cross Section and Groundwater Flow





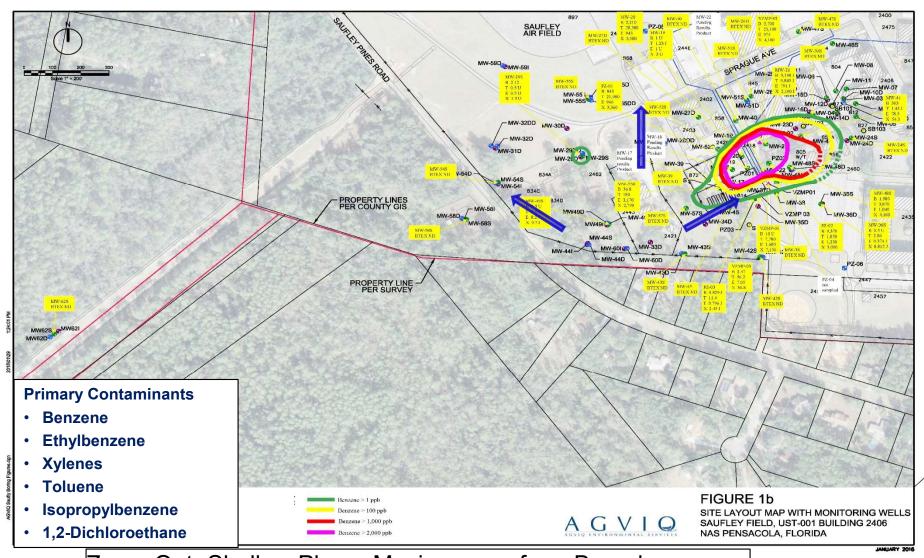
CSM: Shallow GW Benzene Plume 2015





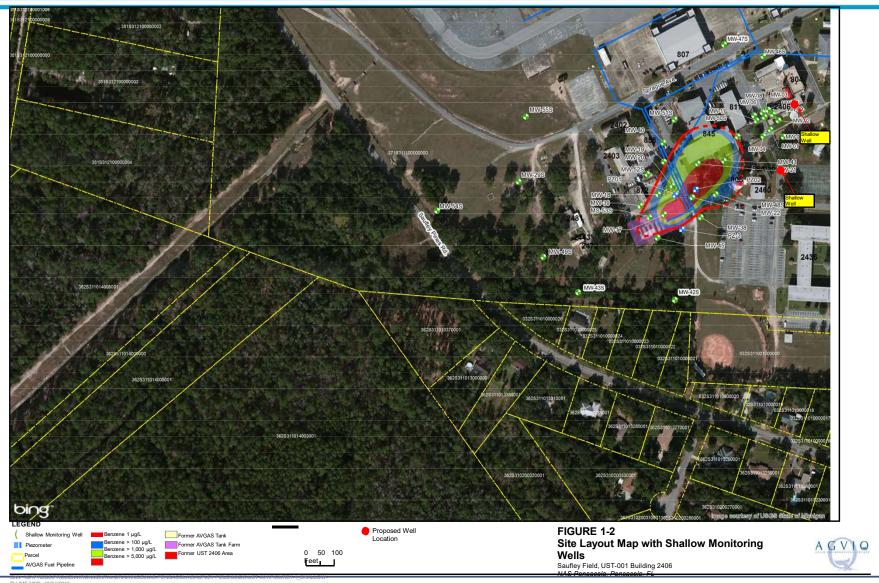
Shallow GW Plume Primary Contaminants





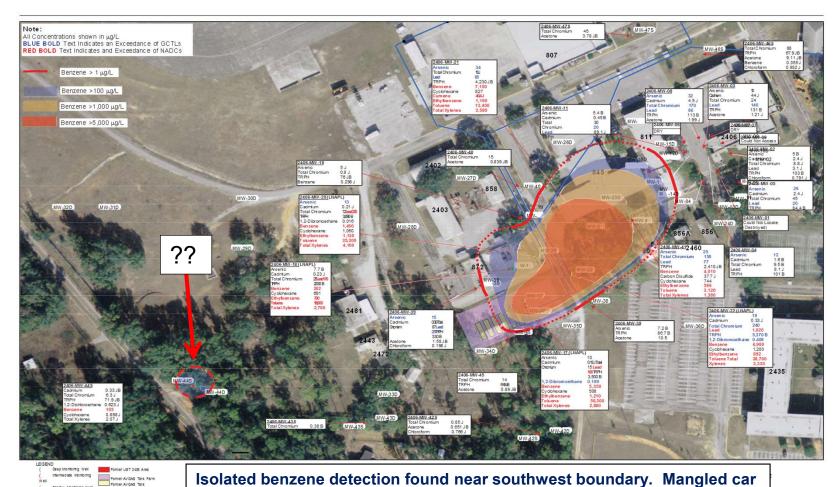


Base and Property Boundaries





UST-001 Shallow Plume

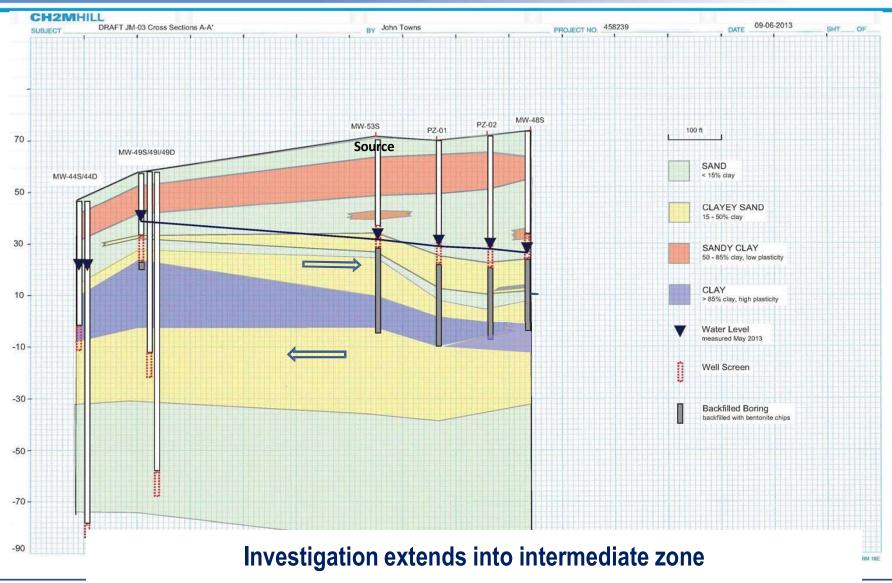


parts also found - location of a horrific car accident a few years earlier which may have resulted in a fuel spill.

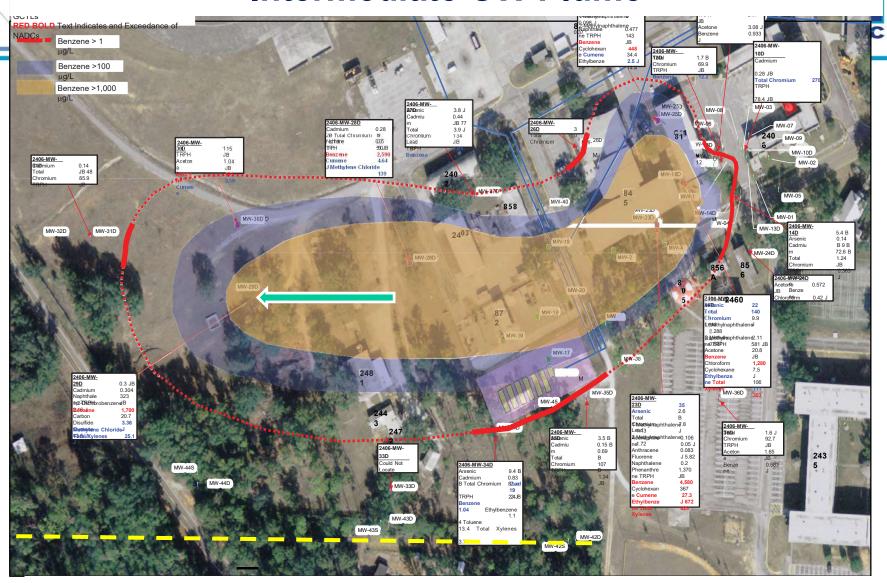
CH2MHILL



Cross Section CSM



Intermediate GW Plume

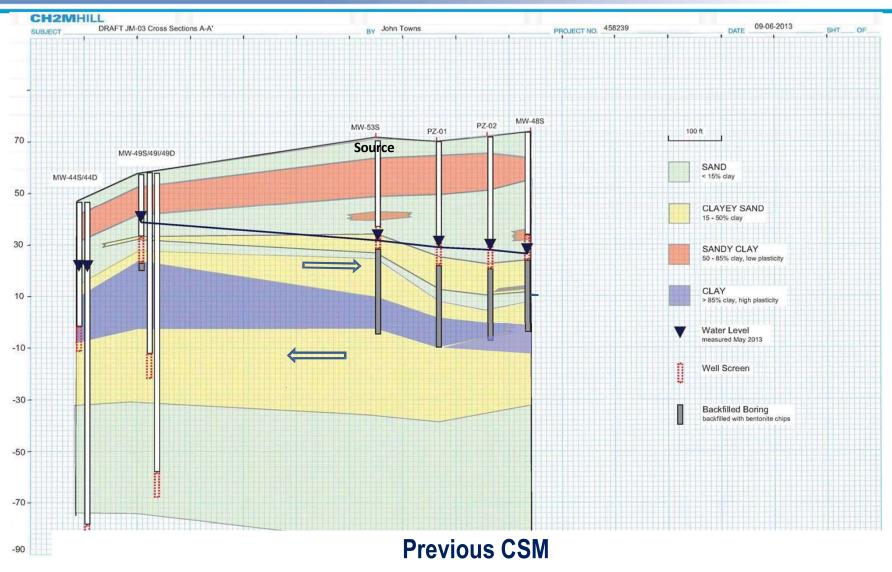


Preliminary Data shows extensive for Intermediate Plume

NAS Pensacola, Pensacola, Pensacola, FL CH2MHILL

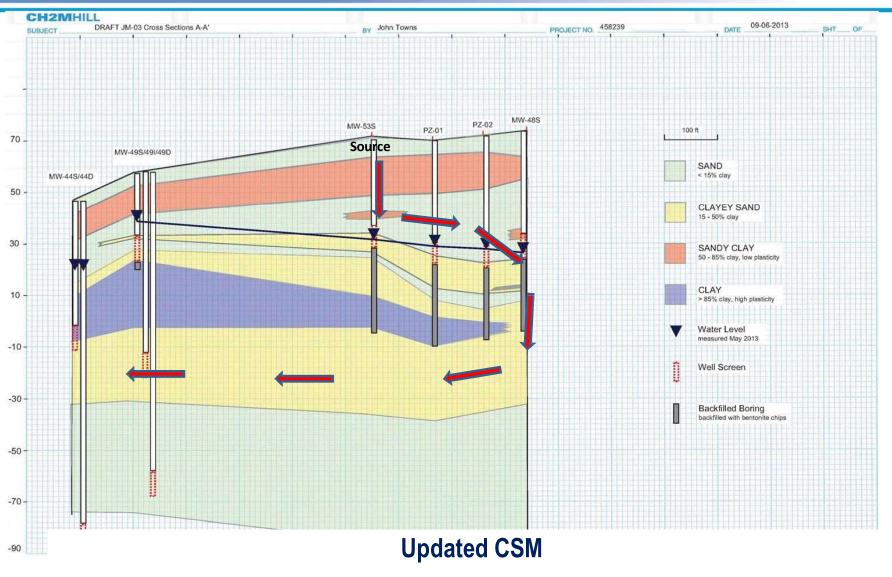


Cross Section



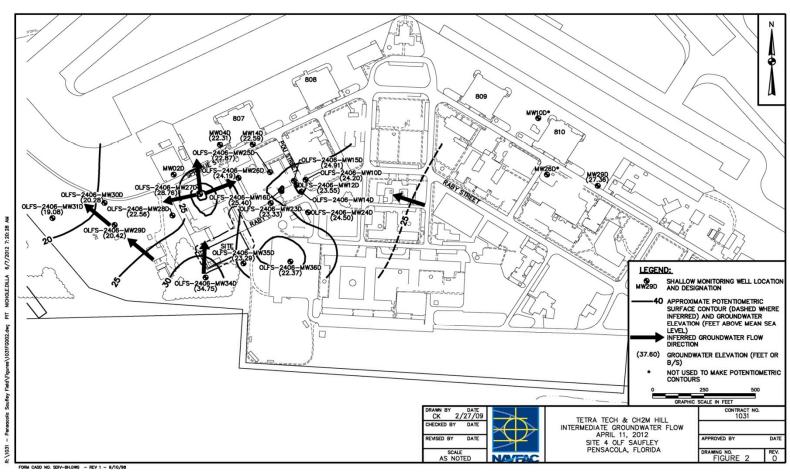


Updated Cross Section



April 2012 Pot Surface

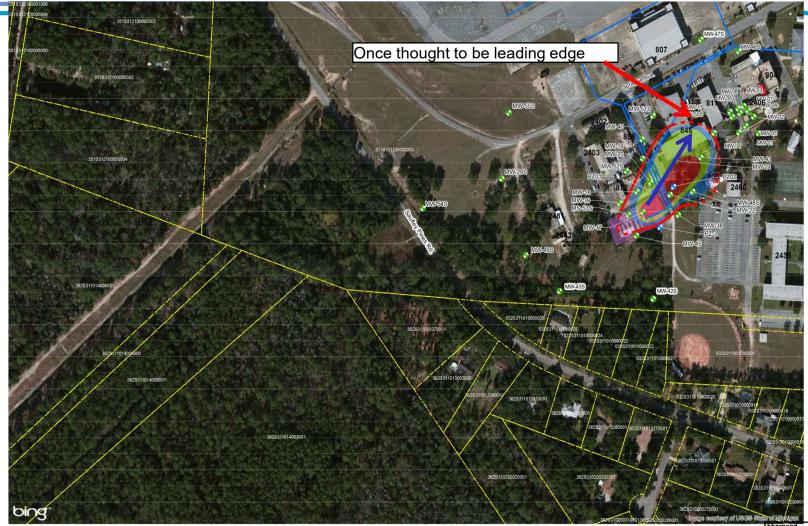




Potentiometric Surface Not Uniform

Shallow Plume



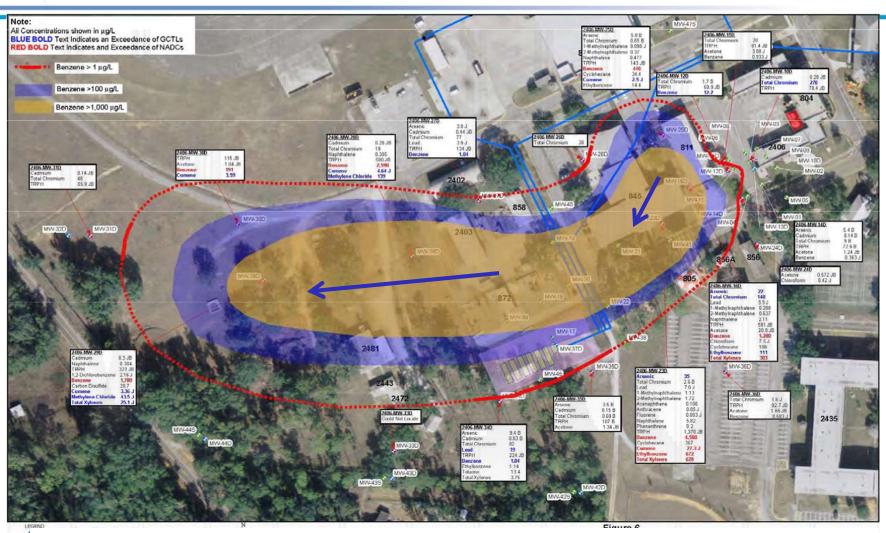




Area once thought to be leading edge - plume drops down through hole in clay layer.

2012 Intermediate GW Results

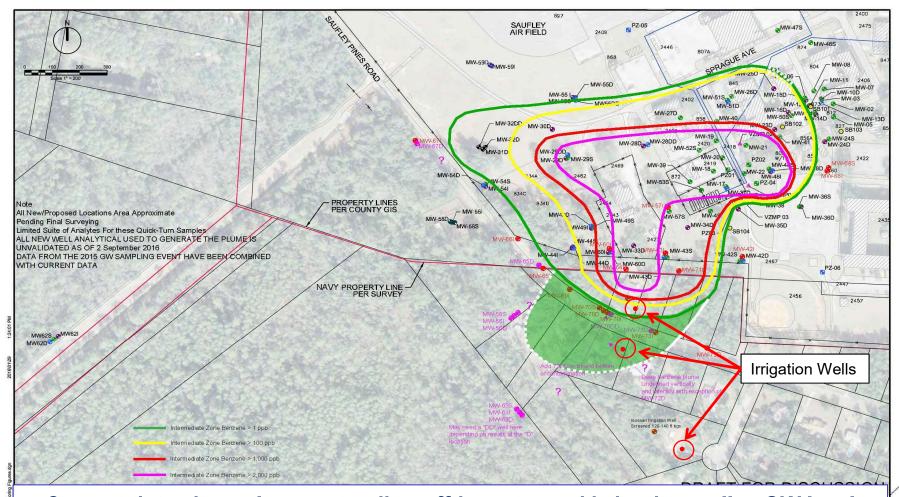




GW level readings & available data supported this preliminary depiction of plume

NAME AND

Plume Extending Off-Base



Current data show plume extending off-base toward irrigation wells. GW level readings were taken during the day and irrigation wells run at night.

Irrigation Well Pump Test



- Groundwater levels were monitored for a period of 4 days and captured the influence of irrigation pumping on 4/14 and 4/17
- Pumping rates from irrigation wells were 25 gpm from the DeHart-north well and 26 gpm from the DeHart-south well
- Drawdown responses to pumping were observed in all but two monitoring locations ranging from 0.5 to 1.7 feet

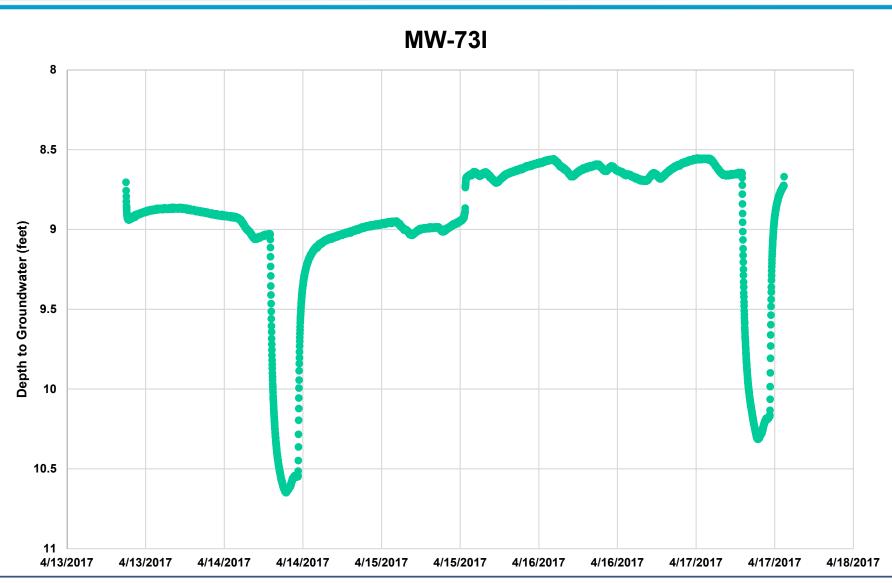




Monitoring Well	Approximate Distance from Pumping Well (feet)	Measured Drawdown (feet)
MW-42D	435	0.55
MW-43I	195	0.90
MW-43D	190	0.60
MW-44D	260	0.50
MW-60I	170	0.60
MW-60D	170	0.55
MW-64I	95	1.25
MW-69I	195	0.90
MW-70S	115	No Response
MW-70I	115	1.40
MW-70D	115	0.70
MW-71I	205	1.05
MW-72D	350	No Response
MW-73I	170	1.70

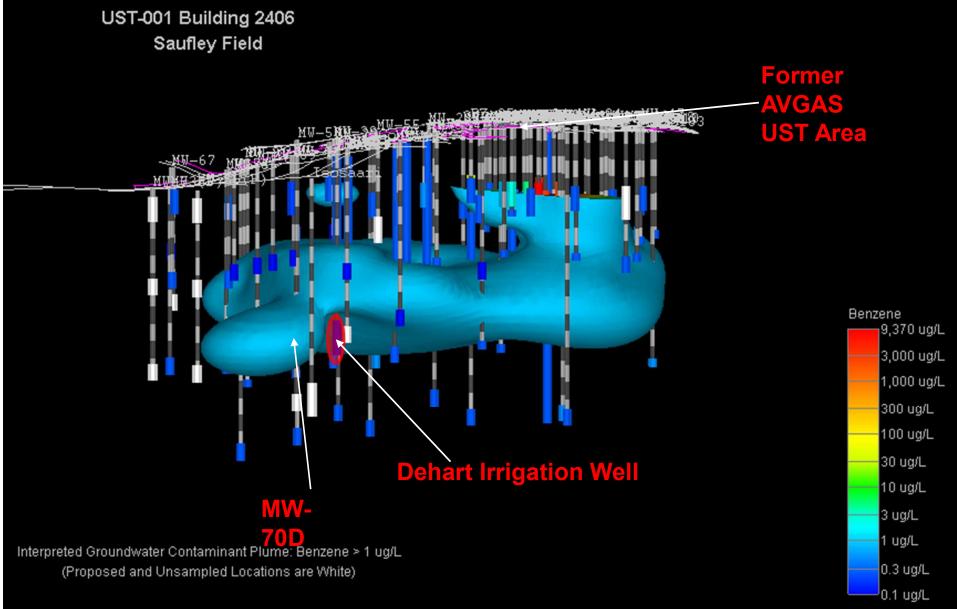
Typical Intermediate Drawdown





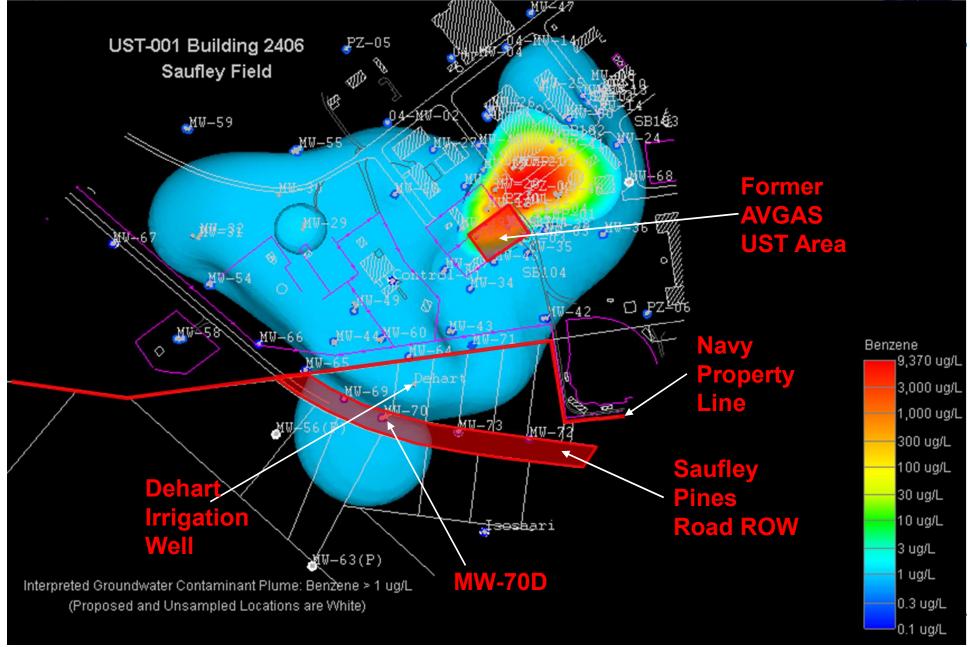
CSM – 2016 –Benzene to 1 ppb





CSM – 2016 –Benzene to 1 ppb





Public Notification



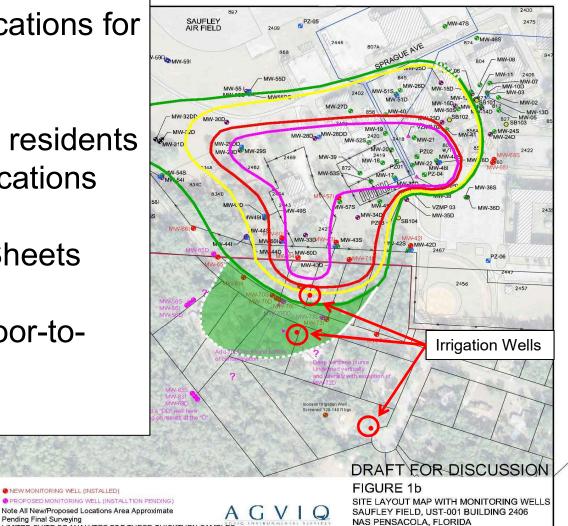
- State issues notifications for off site detections
- Navy notified area residents prior to state notifications
- Letters and Fact Sheets
- Navy personnel door-todoor for in-person explanations

SHALLOW PEIZOMETER

DEEP PEIZOMETER

FENCELINE

AVGAS FUEL PIPELINE



Pending Final Surveying

LEGEND

SHALLOW MONITORING WELL

DEEP MONITORING WELL

SOIL BORING LOCATIONS

VZMP WELL CLUSTER

INTERMEDIATE MONITORING WELL

KNOWLEDGE CHECK



Select an option to mitigate off-base extension of plume

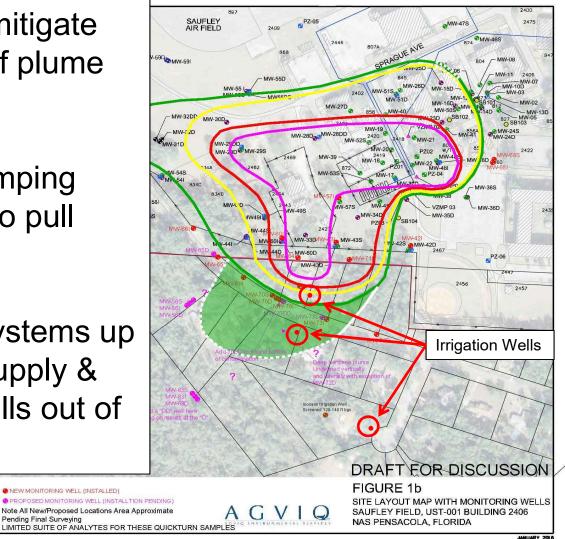
- a) Groundwater pumping inside base line to pull plume back?
- b) Hook sprinkler systems up to public water supply & take irrigation wells out of service?

SHALLOW PEIZOMETER

AVGAS FUEL PIPELINE

DEEP PEIZOMETER

FENCELINE



Pending Final Surveying

LEGEND

INTERMEDIATE MONITORING WELL

DEEP MONITORING WELL

SOIL BORING LOCATIONS

VZMP WELL CLUSTER

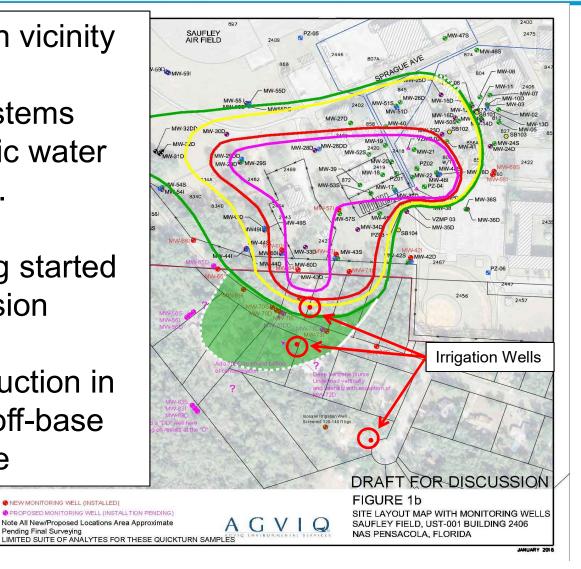
Irrigation Wells Taken Out of Service

- No potable wells in vicinity
- Lawn sprinkler systems hooked up to public water supply Sept. 2017.
- Quarterly sampling started for off-base extension
- Hope to see a reduction in concentration for off-base extension of plume

DEEP PEIZOMETER

FENCELINE

AVGAS FUEL PIPELINE



Pending Final Surveying

LEGEND

INTERMEDIATE MONITORING WELL

DEEP MONITORING WELL

SOIL BORING LOCATIONS

VZMP WELL CLUSTER

Irrigation Wells Taken Out of Service

Short Term Goal:

 Eliminate off-base extension of plume & contain on-base

Long Term Goal:

- Treat source area
- Biosparge/SVE

SHALLOW MONITORING WELL

DEEP MONITORING WELL

SOIL BORING LOCATIONS

VZMP WELL CLUSTER

INTERMEDIATE MONITORING WELL

MNA for on-base plume

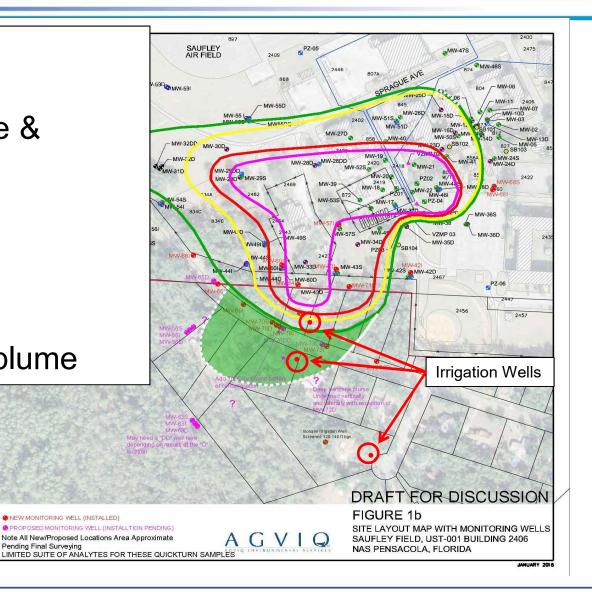
ntermediate Zone Benzene > 1 pph

SHALLOW PEIZOMETER

DEEP PEIZOMETER

FENCELINE

AVGAS FUEL PIPELINE



Pending Final Surveying

Knowledge Check



"It ain't over till it's over" applies to Groundwater Investigations...

Which great philosopher said ""It ain't over till it's over"

- Aristotle
- Plato
- Moe Howard
- Yogi Barra

Contacts and Questions



Points of Contact

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Questions?